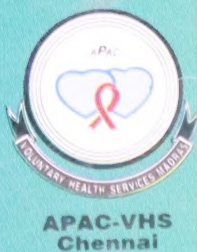


Community Prevalence of Sexually Transmitted Diseases in Tamil Nadu

A Report

APAC project is administered by Voluntary Health Services, Chennai with financial assistance from United States Agency for International Development under bilateral agreement with the Government of India.



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**Community Prevalence of
Sexually Transmitted Diseases
in Tamil Nadu
1998**

A Report

**AIDS Prevention And Control Project
Voluntary Health Services**

AIDS Prevention And Control Project Voluntary Health Services

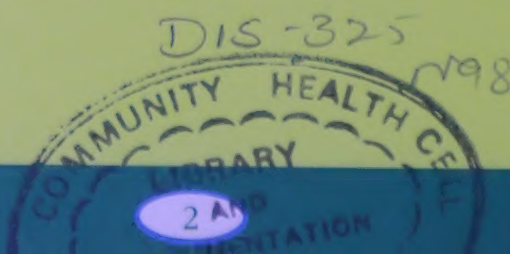
The spread of HIV and AIDS is one of the greatest challenges facing the country today. The scourge of AIDS poses grave economic as well as social and health challenges.

With Tamil Nadu having been identified as one of the states with the highest rate of spread of the disease, urgent measures are required to control the spread of HIV in the State.

So, in November 1995, the Government of India, U.S. Agency for International Development (USAID) and the Voluntary Health Services (VHS), Chennai, came together to promote APAC - AIDS Prevention And Control Project.

APAC was set up with the purpose of reducing the sexual transmission of HIV infection in Tamil Nadu during its span of seven years.

In the last few years of implementation, APAC has evolved newer strategies for implementation and has designed and modified approaches to STD/ HIV/AIDS prevention through ongoing research and evaluation. APAC also strengthens and supports NGOs for the implementation of AIDS prevention and control activities in TamilNadu.



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Foreword

Sexually Transmitted Diseases (STDs) are important co-factors in the transmission of HIV. While there are experiments going on to explore a vaccine for HIV, it is known that STD is curable and controllable. AIDS Prevention And Control (APAC) Project has developed strategies for the prevention and control of STD and thereby control the spread of HIV infection in the community.

APAC Project, administered by the Voluntary Health Services (VHS), Chennai, and funded by USAID, is one of the key players in implementing STD/HIV/AIDS prevention measures in Tamil Nadu. The Project focusses at reducing the sexual mode of transmission of HIV/AIDS in the State. APAC, since its inception in 1995, has been able to contribute significantly to the prevention and control of AIDS.

Many researches carried out by APAC have helped the programme implementers to understand the high-risk sexual behaviour, STD health-care facilities in the State, availability and accessibility of condoms in the State. On similar lines the reliable baseline data on the prevalence of STD was also generated by APAC as it is important to measure the success of intervention programmes which aim to prevent STD. This report contains the findings of the survey and, I hope it will be useful for programme implementers. I congratulate APAC and the consortium organisations – Meenakshi Mission Hospital and Research Centre, Madurai; Clinical Epidemiology Unit, Vellore; Post Graduate Institute of Basic Medical Science, Chennai; and AIDS Research and Control Centre, Mumbai, for the successful completion of the study.

Dr. N.S. Murali

Honorary Secretary
Voluntary Health Services
Chennai

Background

The importance of STD prevention and control in HIV/AIDS prevention programmes cannot be over-emphasised. India has emerged as the country with the maximum number of HIV infections in the world and the numbers are expected to cross two million by the turn of the century. The presence of Sexually Transmitted Diseases such as Syphilis, Gonorrhea and Chlamydia increases the likelihood of sexual transmission of HIV infection among the STD infected. Early diagnosis as well as prompt and appropriate treatment of STD has a vital role to play in the prevention of HIV transmission.

An important objective of AIDS Prevention And Control Project of VHS, supported by USAID, is to control the spread of STD infections in the community by improving services for early diagnosis, appropriate treatment and referral of STD conditions. The emerging epidemic of AIDS in India has made STD control as one of the major strategies and probably the most important to be undertaken on a war footing.

As a first step towards initiating control programmes, it was essential to know the prevalence of specific STD conditions for which the control programmes are to be designed. A literature review of the prevalence studies in India showed that there is a dearth of community-based data on STD. The few studies reported are point-prevalent studies providing information on selected sub-population groups and on a few STD conditions. Even though there is data on HIV and STD prevalence among high-risk groups in India, the true prevalence data from the community is not available. The estimates are highly variable due to the poor understanding of the dynamics of transmission and the relationship between the high-risk groups and the rest of the community.

Since APAC was planning for intervention in the State of Tamil Nadu to reduce the spread of STD/HIV in the community, there was a need for

baseline data to evaluate its intervention strategies. HIV prevalence at the community level is difficult to measure repeatedly. However STD prevalence can be used as a surrogate marker for HIV and can be used for monitoring the success of these interventions.

APAC therefore commissioned a study on community prevalence of STD conditions in Tamil Nadu. The study was undertaken to understand the prevalence of both STD syndromes and the etiological conditions in Tamil Nadu. This study was limited to select STD conditions which, according to a team of experts, are the most commonly observed STD conditions in routine clinical practice in India.

Methodology

The study used a rigorous methodology, which was designed scientifically using technical input from various experts in this area of research. The study was executed through a consortium of organisations. The consortium of institutions which executed the study was Meenakshi Mission Hospital and Research Centre, Madurai; Clinical Epidemiology Unit, Vellore; Post Graduate Institute of Basic Medical Science, Chennai and AIDS Research and Control Centre, Mumbai. The collective strength of these organisations contributed to provide the essential input for the conduct of the study, all of which are unlikely to be found in any single institution. The study was multi-disciplinary in nature and used the expertise of epidemiologists, bio-statisticians, microbiologists, social workers and management experts.

Objectives of the Study

The primary objectives of the study were:

- To determine the community prevalence of Syphilis, Gonorrhea, Chlamydia, Chancroid, Trichomoniasis, HIV and Hepatitis-B.

- To determine the prevalence of STD syndromes such as genital ulcer in both genders urethral discharge in males, vaginal discharge in females, inguinal bubo in both, scrotal swelling in males and pelvic inflammatory disease in females.

The secondary objective of the study was

- To assess the risk factors associated with STD.

A team of experts decided, by consensus, on a list of all STDs that can be practically measured and chose seven diseases, viz. Syphilis, Gonorrhea, Chlamydia, Chancroid, Trichomoniasis Vaginalis, HIV and Hepatitis-B for such measurement.

Population for the Study

A representative sample for the entire State of Tamil Nadu was chosen for the study. A multi-stage sampling design was adopted. In the first stage, three districts in Tamil Nadu were randomly selected. The selected districts were Ramanathapuram, Dindigul and Tanjore. In the second stage, a population proportionate sampling of urban/rural clusters was used to select 30 clusters from each of these three selected districts. The clusters were villages in case of rural areas and wards in case of urban areas as defined by the census data. In the third stage, 15 households were randomly selected in each of the clusters to constitute a unit of the study. In each of the selected clusters a prominent junction such as a temple or a village office was identified. The starting household was randomly selected and the next 15 households were included. A locked house was considered as non-response and was replaced by the next household in the same direction. All adults, aged 15 to 45 years in the target households, constituted the eligible population for the study.

Sample Size

An unpublished data on the prevalence of STD in the community revealed that STD prevalence was about 5% of the population. Based on this

the sample size was calculated with a precision of 2% at 95% confidence interval, incorporating 10% for non-response. It was estimated that approximately 600 subjects were required per district for the study. Thus it was proposed to study a total of 2000 subjects from three districts.

Method of Data Collection

General medical camp approach was adopted for the data collection. Medical camps are generally organised in India to address the health problems of the general population that lives in the remote areas of the country. In the present study three medical teams simultaneously organised camps at three different cluster sites. In each camp, apart from the general population, the study subjects were motivated to come to STD camps by social workers who visited the identified houses prior to the medical camps. The identified target population was the focus of the social workers attached to the study team who visited them repeatedly and encouraged their participation.

Each team conducted two camps per day on an average. The 30-member camp team consisted of supervisors, administrators, doctors, nurses, social workers and other support staff. A total of 90 cluster sites were covered over a period of 45 days. General medical camps were conducted so that not only the target individuals but also the whole community benefited from the camps. It also avoided the stigma for the population attending the STD study camps.

The camps were organised with the cooperation of the local village leader so as to improve the community participation. Any STD syndrome identified during examination was treated according to the guidelines specified by National AIDS Control Organisation (NACO) and follow-up, if required, was done in one of the participating hospitals.

Specific written criteria were used to diagnose the syndromes (NACO guidelines). A study manual with written criteria was available for reference at each camp. Examination and collection of specimens were done with adequate concern for privacy and separate examination

rooms were made available for men and women in each camp. Lady doctors performed genital examination of female patients. Blood and urine specimens were collected from subjects following the examination. The laboratory personnel posted in the camp took care to collect and store the specimens. Camp supervisors ensured that all data were entered accurately, and manually screened the forms for completion before sending them to the study centre. The sexual behaviour questionnaire and the risk factor questionnaire were administered with due concern for privacy.

Microbiological Tests

Clinical specimens for microbiological studies were collected from the target population after obtaining their consent. The specimens were collected using a standardised protocol by trained medical officers and laboratory technicians. The specimens collected included two vaginal and endo-cervical swabs from women, two urethral swabs from men, and 20 ml urine and 5 ml blood each from all subjects.

Table 1: Microbiological Tests

Diseases	Organism Tested	Specimen Collected	Tests Done
Syphilis	T.Pallidum serology (for reagenic antibodies) for treponemal antibodies	Blood (plasma) Blood (serum)	RPR TPHA
Gonorrhea	N. Gonorrhea (cultivation)	Urethral swab Cervical swab	Direct smears for Gram's & Giemsa staining and culture
Chlamydia	C. Trachomatis	Blood (serum), urine	ELISA (antibody) PCR (DNA)
Chancroid	H. Ducreyi	Urethral swab, scrapping from ulcers	Smears for Gram's & Giemsa staining culture for H. Ducreyi
AIDS	HIV 1 & 2	Blood (serum)	ELISA (antibody)
Hepatitis-B	Hepatitis-B Virus	Blood (serum)	ELISA (HbsAg)
Trichomoniasis	T. Vaginalis	Vaginal swab	Direct wet mount

Table 2: Specimens and Investigations

Clinical Specimens	Number Collected	Investigations	Number Tested
Vaginal swabs	1087	W.F. for TV	1087
Urethral swabs	824	Culture for N. Gonorrhea	824
		Culture of H. Ducreyi	812
		Smear for N. Gonorrhea, etc	824
		Smear for H. Ducreyi	812
Endocervical swabs	1119	Culture for N. Gonorrhea	1119
		Culture for H. Ducreyi	1106
		Smear for N. Gonorrhea, etc	1119
		Smear for H. Ducreyi	1106
Urine	1943	Chlamydia PCR	200
Blood (Plasma)	1872	Syphilis serology RPR	1872
Blood (Serum)	1874	Syphilis serology TPHA	1872
		HbsAg	1856
		HIV (1 & 2)	1866
		Chlamydia IgM	1874
Total	8719		18349

Specimen Preparation and Transportation

The vaginal swabs were immediately subjected to wet film microscopy to screen for Trichomoniasis Vaginalis (T.V.) at the camp site itself. Urethral swabs and endo-cervical swabs were collected in AMIES charcoal transport media (Murex). Smears were prepared from the second swab and heat fixed.

Urine specimens collected in 20 ml sterile conical tubes were centrifuged at 8000 rpm for 20 minutes. Plasma and sera were separated after centrifugation at 3000 rpm for 10 minutes and stored in vials. All clinical specimens were kept in ice bath, while processing. All specimens were stored in liquid nitrogen or packed in dry ice and transported every day to be processed at the coordinating microbiology laboratory at Chennai.

Bacteriological Methods

Smears from urethral and endo-cervical swabs were stained with Gram's and Giemsa stain. Gram's stain was used to identify organisms morphologically resembling *Neisseria Gonorrhea*, *Haemophilus Ducreyi* (*Candida Species* and *Gardnerella Vaginalis*), while the Giemsa smear was viewed for intracytoplasmic inclusions of *Chlamydia Trachomatis*. Isolation of *N. Gonorrhea* from urethral/endo-cervical swabs were attempted using oxide chocolate agar with horse blood and VCN supplement (Vancomycin, Colistin and Nystatin). Identification and test for beta lactamase production were conducted as per standard procedures (REF 12). *H. Ducreyi* was isolated from the above swabs on oxide chocolate agar with horse blood and Vancomycin alone. Identification and antibiotic sensitivity were also done according to the standard procedures.

Serological Studies

Serology for Syphilis, HIV infection, Hepatitis-B and genital *Chlamydia* infection was conducted on the plasma samples using standard commercial kits. Syphilis serology was conducted by RPR card test (CARBOCFN Tulip Diagnostics, India) and by TPHA (WELLCOS YPH-HA-Murex Diagnostics, UK). ELISA for HIV was carried out using GENELAVIA (r) MIXT kit of Sanofi Diagnostics Pasteur Inc, France. Anti-HIV reactive samples were re-tested and confirmed by another ELISA kit (HIV-FIA) of Labsystems Oy, Finland. Hepatitis-B surface antigen (HbsAg) screening was done as a marker of Hepatitis-B infection in the community using HEPANSOSTIKA-UNIFORM II HbsAg kits (Organon Teknika, Netherlands). All the positive sera were reconfirmed using wellcozyme-HbsAg kit of Murex Diagnostics, UK. IgM antibodies to detect genital *Chlamydia* were tested by Elisa using SAVYON-CHLAMYDIA-True IgM kits.

Statistical Methods

SPSS Ver 6 for windows and SUDAAN were used in the analysis of data. Probability of selection for age and sex distribution was from 1991 census data. Since a household in a cluster with larger number households had a smaller chance of selection compared with a household in the cluster with smaller number of households, inverse of cluster size was considered as the probability of selection. The probabilities of age and sex distribution and cluster size were multiplied and inverse of the product was taken as the weight. The weight was scaled to average unity. Cluster adjustments at three levels, viz. district, cluster and households, were performed. Prevalence at 95% confidence level was computed.

Training, Pilot Study & Quality Control

Two pilot study camps were conducted in a semi-rural and in an urban slum setting to evaluate the population's acceptance of the STD screening in a medical camp. During this camp the data form and the method of screening were pre-tested and finalised. Based on the lessons learnt in the pilot camp, a two-day workshop was conducted to standardise the methodology of clinical examination, specimen collection, data entry and transportation of specimens. A detailed study manual was made available to all the study participants to standardise the procedure further. The tools used for data collection for clinical and epidemiological data, apart from laboratory data, were developed and standardised. All laboratory procedures were also standardised at this workshop.

Quality control features were incorporated in the design of the study at different phases to obtain high quality data. A two-day workshop was conducted to standardise the methodology of clinical examination, specimen collection, data entry and transportation of specimens. Here, the camp doctors were trained for recognition of STD syndromes by

direct tutorials and video demonstration. Copies of a manual containing methodology of identification of cluster, households and target individuals, details of clinical examination, specimen collection, data entry and transportation of specimens to laboratory were given to the doctors. All the data obtained in the study were double entered on a data-base. Range checks were instituted to minimise transcription error. Internal and external quality control techniques were used to generate high quality data for laboratory procedures. Internal quality control for microbiological methods was obtained using ATCC standard bacterial strains and WHO panel sera as controls obtained from CDC, Atlanta. External Quality Assessment (EQA) was carried out by sending coded sera and plasma samples randomly selected from among the study materials to ARCON Laboratories, Mumbai, for TPHA, HbsAg and anti-HIV testing. The results, which showed discrepancies, were sorted out by re-testing at CMC Hospital, Vellore.

Ethical Issues

The design of the study specifically considered the ethical issues involved in the community screening of STD and HIV. The methodology was cleared through the Institutional Review Board at the Christian Medical College and Hospital, Vellore. The study ensured confidentiality of the subjects. During the camp, the target population was protected from the labelling effect by carefully screening the entire population through a general medical camp. Participants attending the general camp did not know the true nature of the study. However the target population was explained the true intention of the study and written consent was obtained before the detailed clinical examination, administering the questionnaire and collecting specimens. No coercion was applied on unwilling participants. Individuals detected to have any STD conditions were informed of their disease status and treated appropriately. The results of HIV tests were held confidential since no treatment was available for asymptomatic HIV carrier state. Special

effort was taken to see that all the participants attending the camp benefited from the check-up. Screening for common diseases like Hypertension, Diabetes Mellitus and Anaemia was done on all patients. Anti-Helminthic medication and oral iron replacement were provided for all children and anaemic patients. Persons with hypertension and diabetes identified during camps were referred to the participating voluntary health organisations for follow-up and treatment.

Sample Size

Data was gathered from 30 clusters each from the sample districts of Tanjore, Ramanathapuram and Dindigul. A total of 20975 people were examined in medical camps. A total of 8719 clinical specimens were processed for 18349 investigations to diagnose microbiologically proven STD conditions. A pre-identified sample population of 1981 individuals in 1114 target households sampled from 90 clusters were subjected to the study. Refusals were kept to a minimum of 3.9% for genital examination. 76% of the subjects were from rural areas.

Table 3: Study Sample Coverage

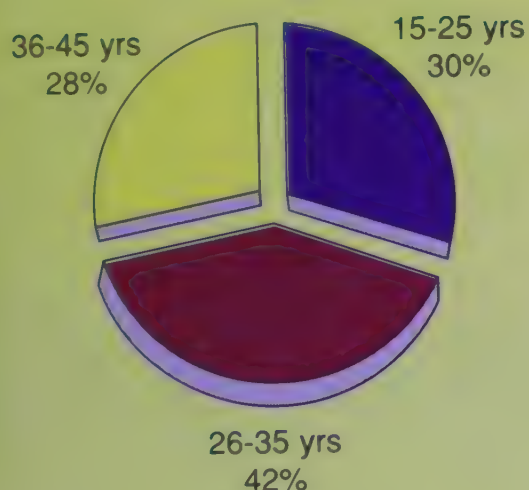
Sample Districts	General Camp	Eligible Population	Households	Target Population	Refusals
Tanjore	7393	1189	371	654	21 (3.2%)
Ramanathapuram	6311	1264	379	672	20 (4.3%)
Dindigul	7271	1263	364	655	27 (4.1%)
Total	20975	3716	1114	1981	77 (3.9%)

Demographic characteristics

The profile of the sample households and individuals was collected for the demographic characteristics such as age, marital status, education, occupation and type of house, location, etc. This section briefly presents the profile of the sampled population.

Age Group

1. Age Group

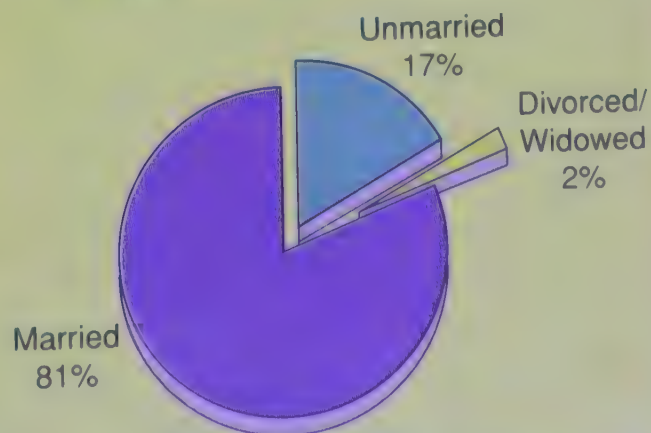


There were 824 (42%) men and 1157 (58%) women in the target population. According to the eligibility criteria only the individuals in the age group of 15 to 45 years were represented in this population. Of them 599 (30%) belonged to 15-25 years age group, 824 (42%) to the age group of 26-35 years and 558 (28%) to the age group of 36-45 years. The average age was 31 (SD 8) years.

Marital Status

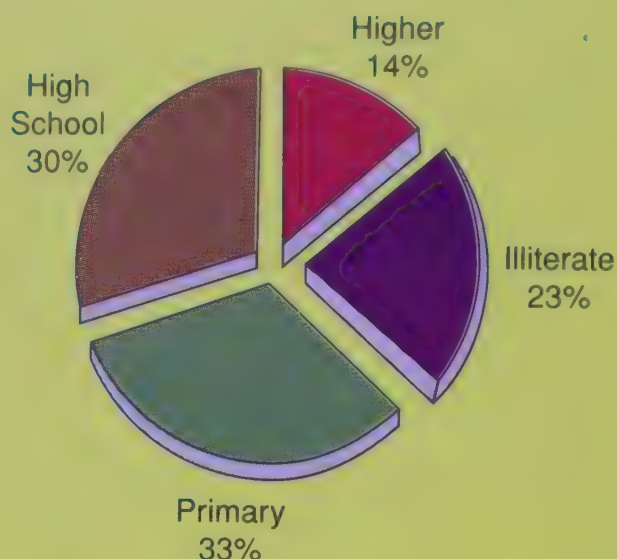
There were 1587 (81%) married and 344 (17%) unmarried. Divorced or widowed subjects in the target population were 46 (2.3%)

2. Marital Status



Education

3. Education

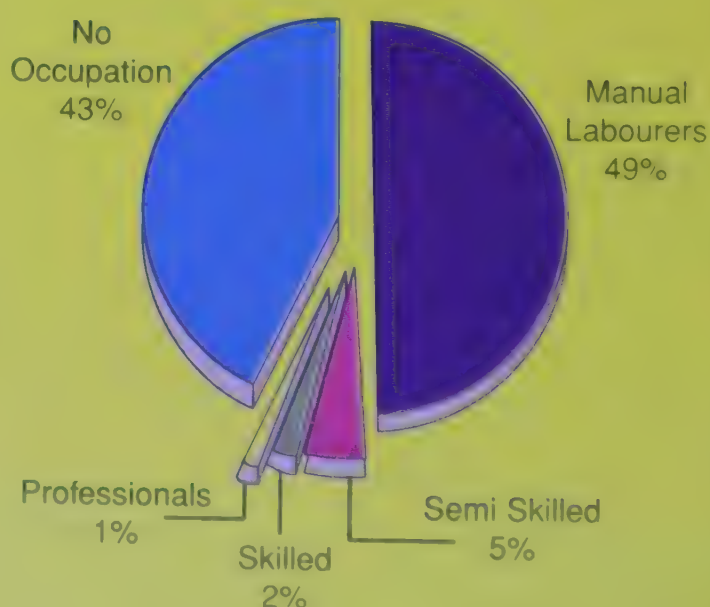


The educational background of the study population showed that 465 (23%) were illiterate, 642 (33.4%) had primary education, 601 (30%) had high school education and only 273 (14%) had higher educational levels.

Occupation

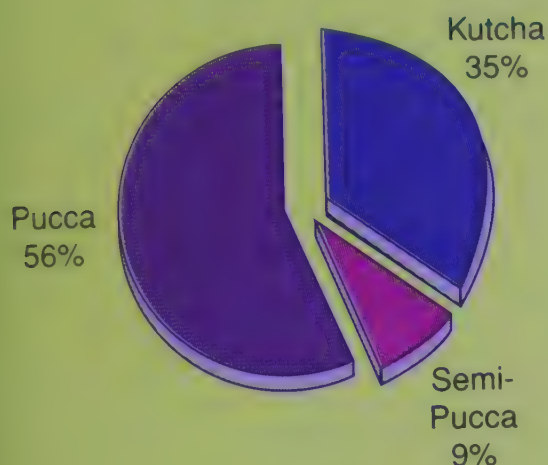
Most of the subjects, 968 (49%) were manual labourers, while the semi-skilled, skilled and the professionals were 102 (5%), 41 (2%), and 28 (1%) respectively. There were 842 subjects who were classified as having no occupation of whom 622 were married women (housewives).

4. Occupation Type



Type of Housing

5. Housing Type

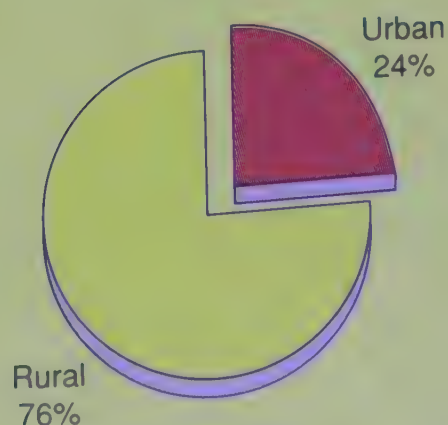


Among the subjects 684 (35%) lived in kutcha houses, 171 (9%) in pucca houses and 1126 (56%) in semi kutcha houses. Kutcha houses are houses constructed out of mud and pucca houses are those made of cement, bricks and concrete. Semi-kutcha houses are those with both types of construction.

Place of Residence

Rural representation in the sample was 1504 (76%) and urban 477 (24%).

6. Residence Location

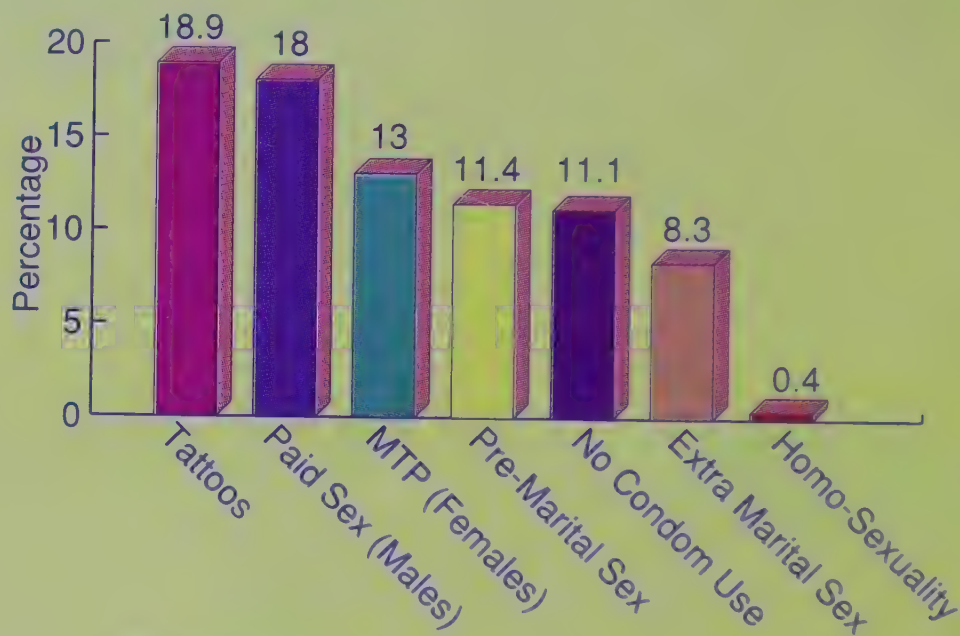


Risk Behaviours

Some of the important risk factors of STD in the community were measured in the study. The subjects were interviewed for behaviours by adopting a standardised questionnaire.

It was observed that only a small percentage (3.8%) of the subjects has received blood transfusion.

7. Risk Behaviours



(Fig. 7)

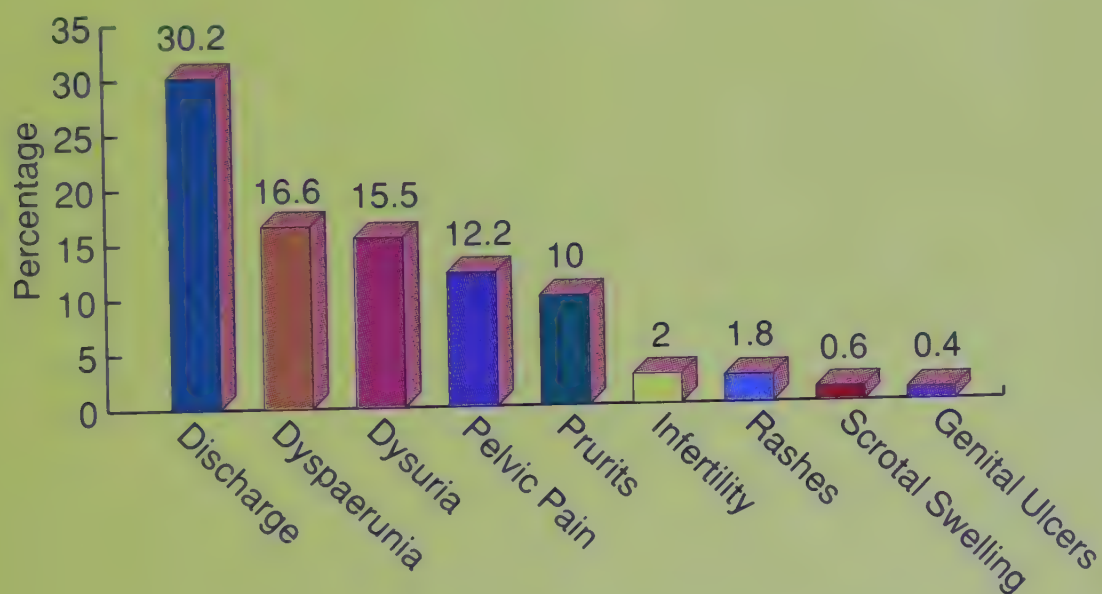
With regard to the behaviour of taking injections, 78% of the subject population has received more than one injection per year, 38% received more than 6 injections and 14% received more than 20 injections per year. Among them 44% had never used disposable needles. Only 21% always used disposable needles for injections.

The other risk behaviours are highlighted in figure 7. It can be noticed that 18% of the males reported having had paid sex, 8.3% had involved in extra-marital sex and 11.4% in pre-marital sex.

Genital Symptoms

There were 1904 subjects in the target population who were willing to answer questions on their sexual behaviour and clinical complaints. 47.3% of the 1904 subjects reported genital symptoms.

8. Genital Complaints



Genital discharge was noted to be the most common symptom and was present in 576 (52.5%) women and 14 (1.7%) men. The presence of any one of the three common symptoms of vaginal discharge, dyspaerunia and lower abdominal pain was noted in 660 (60%) women subjects. It was noted that 67 (32%) of women and 81 (72%) of men with proven STDs had no significant genito-urinary symptoms.

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STD Syndromes

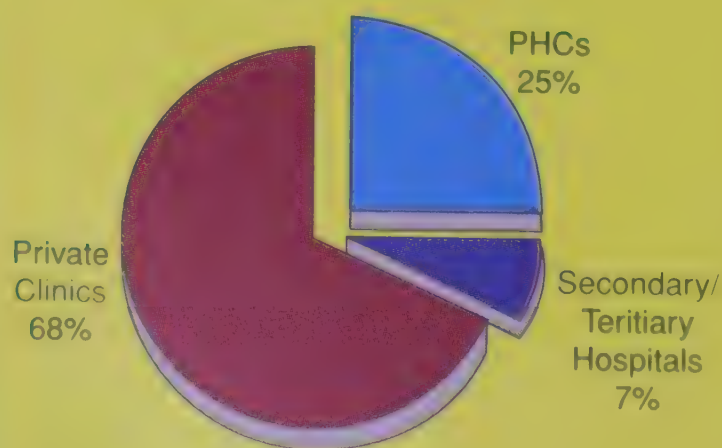
Atleast one of the STD syndromes was present in 486 (24.5%) of all subjects. Genital discharge in women was the most common syndrome and was found in upto 41.5% of women in the target population. The other syndromes were found to be much less. Genital Ulcer, Scrotal Swelling in men and PID in women were the other common syndromes in the community.

Table 4: STD Syndromes among Men and Women

Syndrome	Percentage
Vaginal Discharge (W)	41.50
Genital Ulcers (W)	2.70
PID (W)	0.60
Scrotal Swelling (M)	2.10
Urethral Discharge (M)	0.20
Genital Ulcers (M)	0.10
Bubo (M)	0.02

Treatment Sources

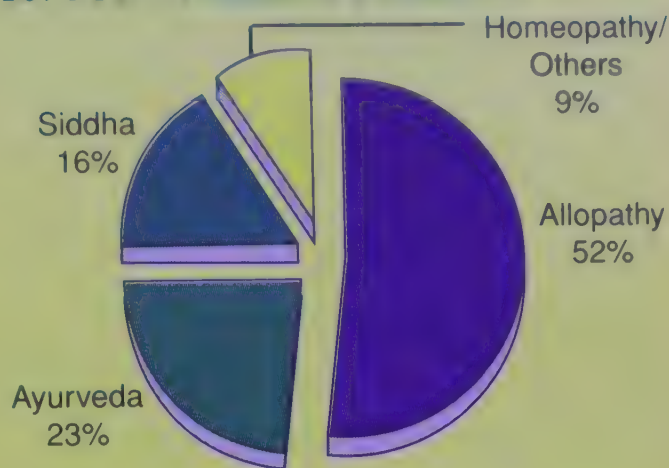
9. Treatment Sources



Most of the people who seek treatment for STD go to private clinics (68%) and 25% get attention in Government Primary Health Centres in the region. Very few, about 2% each, get attention at the secondary and tertiary level hospitals in the State.

Practitioners who are qualified in different systems of medicine run private clinics. Only 52% of those who seek treatment for STD go to doctors who practise Allopathy and upto 48% of the patients are seen by those who practise alternate systems of medicines in Tamil Nadu.

10. STD Treatment Preferred

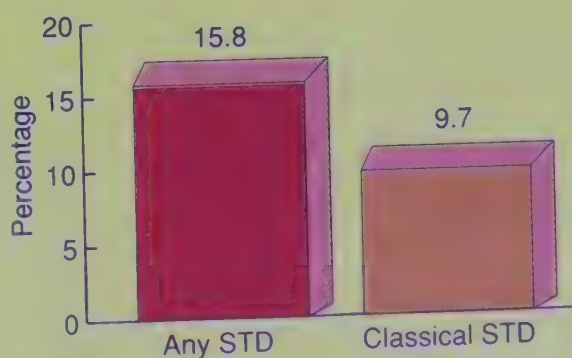


The practitioners of Siddha system of medicine attract 16% of the STD patients and the practitioners of Ayurveda system treat 23%. Patients also seek treatment from homeopaths and unqualified practitioners (9%).

STD Prevalence

The most common condition diagnosed by the laboratory criteria in the study was Hepatitis-B, diagnosed by positive surface antigen HbsAg (5.3%), Trichomoniasis by wet smear preparation from vaginal secretion (5.1%) in women, followed by Chlamydia positive for IgM Elisa test (3.9%), Gonococci (3.7% culture positive only). HIV by Elisa was noted in 1.8%. Syphilis was diagnosed by TPHA and Chancroid by culture of *Haemophilus Ducreyi*. There were 329 subjects who had at least one microbiologically proven Sexually Transmitted Disease measured in the study.

11. Overall Prevalence of STD



The overall prevalence of STDs, including HBV & HIV was noted to be 15.8% (CI: 12.9% - 18.7%) in the community. There were 23 (7%) subjects with two STD conditions and 2 (0.6%) subjects with three STD conditions. Among those who had microbiologically proven STDs, there were 215 (65%) women and 114 (35%) men.

Excluding HBV & HIV there were 202 subjects having STD with a prevalence of 9.7% (CI: 7.8 - 11.7%). The number and percentage of prevalence of individual disease conditions and their distribution in different age groups, sex and residences are given in Table 5.

12. Common STDs by Lab Diagnosis

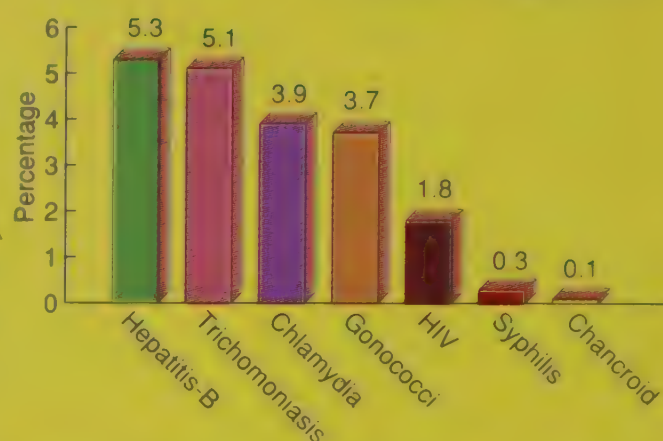


Table 5 : Prevalence of STD (in percentage)

STD	Location			Sex		Age Group (years)			
	All	Rural	Urban	M	F	15-19	20-29	30-39	40-45
Any STD	15.8	16.1	15	12.5	18.1	16.7	15.1	17.2	14.2
Classical STD	9.7	9.1	11.4	5.5	12.6	7.3	10.3	10.6	8.1
Gonococci	3.7	3.5	4.4	3.4	3.9	2.2	4.3	3.6	3.5
Syphilis	0.3	0.2	0.4	0.3	0.2	0.4	0.1	0.01	1.1
Chlamydia	3.9	3.4	5.4	2.0	5.2	4.9	3.8	5.3	1.3
Trichomoniasis	5.1	5.2	4.9	-	5.1	0.1	4.3	6.4	5.9
HbsAg	5.3	5.9	3.3	6.0	4.8	10.3	3.9	5.7	4.8
HIV	1.8	2.1	0.7	1.4	2.0	---	1.9	1.8	2.2

The study revealed no significant rural and urban differences in the prevalence of STD: 15.0% (CI: 9.8 - 20.3) in the urban clusters and 16.1% (CI: 12.7 - 19.5) in rural clusters. However the prevalence of HIV was significantly different ($P = 0.04$). We have to be cautious while interpreting this result. The classification of rural and urban was based on census data which is dependent on the population size and not on accessibility by road or social characteristics of the population. There were very few city-based clusters in the urban centres and many of the rural centres were semi-urban ($> 5\text{KM}$ from an urban centre). Therefore the population from the urban clusters may not represent a city slum population and the rural clusters may not be truly representative of the isolated village population. It was not our primary objective to look at the difference between cities and villages. To detect this difference a systematic sampling technique may be more suitable. However the observations of this study can be generalised across the whole population of Tamil Nadu and it demonstrates that STDs and HIV are not limited to the urban slum setting and high-risk population, but is spread into other regions of Tamil Nadu.

Conclusion

- Prevalence of any STD condition in Tamil Nadu was 15.8% and this fell in the high endemic rate for the community. However classical STD remains at 9.7% in the study community.
- The age group maximum at risk for any STD was 30-39 years. However HbsAg has more prevalence among younger age group of less than 19 years.
- Prevalence of HIV among women was higher than men.
- While all STDs were widely prevalent in both rural and urban population, HIV and HbsAg appear to be more prevalent in the rural areas than in urban.
- Genital discharge and sexual complaints were very common and were reported in upto 38% of the population.

- The syndrome of vaginal discharge was noted in 42% of women and showed poor association with organisms associated with syndromic case management suggesting that other reproductive tract infections and STDs were contributing to this problem.
- The overall HIV prevalence in the community was as high as 1.8% and this is more than previously suspected.
- There was considerable variation in the prevalence of HIV and STD in different districts in Tamil Nadu.
- The community prevalence of HbsAg is 5.3% and this was maximum (10%) in the teenage population of Ramanathapuram. The reason for this high prevalence in a subset of population needs to be explored.

Estimations of STD and HIV based on the STD prevalence study

For a population of 25 million in Tamil Nadu

In the age group of 15-45 years

- About 2,425,000 people have any one of the six STDs.
- About 1,325,000 people are infected with Hepatitis-B virus and carry the surface antigen.
- About 450,000 people are infected with HIV.

For further information contact:

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APAC - VHS - USAID PROJECT

The goal of the Project is to reduce the sexual transmission of HIV/AIDS in Tamil Nadu. The purpose of the Project is to introduce and reinforce HIV-preventive measures in High-Risk behaviour populations.

Achievements, by the end of the project, are expected to include:

- a. A network of NGOs involved in AIDS prevention
- b. Programmes to build the capacity of NGOs to ensure quality intervention projects
- c. Increased numbers of people aware of STD/HIV/AIDS preventive measures
- d. Promotion of condom sales and use
- e. Provision of quality STD services, which are accessible and affordable
- f. Behavioural and epidemiological research to help modifications in programme direction for the Government and voluntary agencies

United States Agency for International Development

For nearly 50 years, USAID has played an important role in India's development successes. Today, USAID's programme in India supports:

- Enhanced survival rates for children
- Improved access to reproductive health services
- Reduced transmission of HIV/AIDS infection and other infectious diseases
- Empowerment of women to participate in decisions that affect their lives
- Increased environmental protection in energy, industry and cities

Visit USAID site to learn more about its activities:

www.info.usaid.gov/india

The Voluntary Health Services

VHS, a self-sustainable, non-profit registered society, was founded on 14th July 1958. Its basic concepts include - prevention and care of serious illnesses, fostering of the family as a unit for medical care, income-based medical insurance scheme for the family, community participation in health care delivery, organisation of community-based medical care and education, job oriented training and applied medical research.

These objectives form the vision of the founder-father of the Voluntary Health Services and doyen of the medical profession, Prof. KS Sanjeevi.

The cornerstone for the first block was laid in October 1961 by Pandit Jawaharlal Nehru and by July 1963 the Medical Centre had been fully equipped and staffed with the commencement of inpatient care.

Dr. Sanjeevi was a pioneer in introducing the concept of evolving a hospital through voluntary efforts, laying emphasis on disease prevention and involving the family as a unit for medical care. At VHS this is done by securing community participation through enrolment of families as members, particularly from the weaker sections of society.





AIDS Prevention And Control Project

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